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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/944,150	09/04/2001	Kenichiro Kami	12-006	9102

23400 7590 01/12/2004

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EXAMINER

DOVE, TRACY MAE

ART UNIT	PAPER NUMBER
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1745

DATE MAILED: 01/12/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

eb11

<b>Office Action Summary</b>	Application No.	Applicant(s)	
	09/944,150	KAMI ET AL.	
	Examiner	Art Unit	
	Tracy Dove	1745	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 23 October 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-31 is/are pending in the application.
- 4a) Of the above claim(s) 1-19 and 29-31 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 20-28 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. §§ 119 and 120**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) ☒ All b) ☐ Some \* c) ☐ None of:  
 1. ☒ Certified copies of the priority documents have been received.  
 2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
 a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)                      4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)                      5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 5.                      6) ☐ Other:

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## **DETAILED ACTION**

### ***Priority***

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

### ***Information Disclosure Statement***

The information disclosure statement (IDS) submitted on 1/4/02 has been considered by the examiner.

### ***Election/Restrictions***

Applicant's election without traverse of Group III, claims 20-28, in Paper No. 10 is acknowledged.

### ***Claim Analysis***

The claims recite the transitional phrase "composed of", which has been interpreted in the same manner as either "consisting of" or "consisting essentially of," depending on the facts of the particular case. See MPEP 2111.03.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 20-28 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

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Claim 20 recites the limitation "*the group* contained in the polymer material" in line 5. There is insufficient antecedent basis for this limitation in the claim. Furthermore, it is unclear what "the group" encompasses and how "the group" is defined.

Claim 20 recites the limitation "*the carbon atoms of the backbone chain*" in lines 7-8. There is insufficient antecedent basis for this limitation in the claim.

Claim 21 recites the limitation "the modifier" in line 4. There is insufficient antecedent basis for this limitation in the claim.

Claim 21 recites the limitation "the polymerization group" in line 6. There is insufficient antecedent basis for this limitation in the claim. Furthermore, "the polymerization group open" is unclear and confusing.

In claim 22, it is unclear how "said polymerization group" "is an unsaturated multiple bond".

Claim 23 recites improper claim language. The claims should recite "selected from the group consisting of ethylene... and  $\gamma$ -(methacryloxy propyl)" or "at least one of ethylene...or  $\gamma$ -(methacryloxy propyl)". See MPEP 2173.05(h).

Claim 24 recites the limitation "the modifier" in line 4. There is insufficient antecedent basis for this limitation in the claim.

Claim 24 recites the limitation "the polymerization group" in line 6. There is insufficient antecedent basis for this limitation in the claim. Furthermore, "the polymerization group open" is unclear and confusing.

In claim 25, it is unclear how "said polymerization group" "is an unsaturated multiple bond".

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Claim 26 recites improper claim language. The claims should recite "selected from the group consisting of ethylene... and  $\gamma$ -(methacryloxy propyl)" or "at least one of ethylene...or  $\gamma$ -(methacryloxy propyl)". See MPEP 2173.05(h).

To the extent the claims are understood in view of the rejections above, note the following prior art rejections.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 20-28 are rejected under 35 U.S.C. 102(b) as being anticipated by Tsukuda et al., EP 0898316 A1.

Tsukuda teaches a separator for a nonaqueous electrolyte battery comprising a porous base of at least one material selected from the group consisting of a porous film, a woven fabric and nonwoven fabric containing organic fiber and a paper. An organometallic compound is applied to the porous base [0032]. The porous base may contain polyvinyl alcohol and the organometallic compound is an organosilicon compound. The organosilicon compound may be a organosilane or organopolysiloxane having at least one hydrolyzable group or functional group [0041-0045]. The porous film is allowed to contact a solution of the organometallic compound [0046]. The porous film may be a polyolefin resin or a fluorocarbon resin, but is not limited [0056]. The organosilicon compound may be ethyltriethoxysilane, vinyltrimethoxysilane, tetramethoxysilane, vinyltriethoxysilane, vinyltris( $\beta$ -methoxyethoxy)silane,  $\gamma$ -

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methacryloxypropyltrimethoxysilane,  $\gamma$ -aminopropyltrimethoxysilane or  $\gamma$ -aminopropyltriethoxysilane [0118].

Thus the claims are anticipated.

Note that Tsukuda does not state a LUMO energy value or a HOMO energy value for the organosilicon compound (modifier). However, since the organosilicon compound of Tsukuda and the modifier compound of the instant claims may both be the same compound, Tsukuda inherently teaches the LUMO energy value and HOMO energy value claim limitations.

### *Conclusion*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tracy Dove whose telephone number is (703) 308-8821. The Examiner may normally be reached Monday-Thursday (9:00 AM-7:30 PM). My supervisor is Pat Ryan, who can be reached at (703) 308-2383. The Art Unit receptionist can be reached at (703) 308-0661 and the official fax numbers are 703-872-9310 (after non-final) and 703-872-9311 (after final).



Tracy Dove  
Patent Examiner  
Technology Center 1700  
Art Unit 1745

January 6, 2004